10-Point Regional Strategy for Food Safety in the South-East Asia Region

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INTRODUCTION

The South-East Asia Region of the World Health Organization comprises ten member states, viz., Bangladesh, Bhutan, India, Indonesia, Democratic People's Republic of Korea, Maldives, Myanmar, Nepal, Sri Lanka and Thailand. In recent years, the countries of the Region have made significant achievements in improving the health of, and services to their ever-growing populations.

In spite of these achievements and the very considerable financial and technical investment by national governments, international organizations, including the World Health Organization, the Food and Agriculture Organization, bilateral aid agencies and nongovernmental organizations, protein-energy malnutrition, micronutrient deficiencies and diarrhoeal diseases remain major causes of morbidity and mortality. Many hundreds of millions of diarrhoeal disease cases are reported annually and many more individuals are exposed to diarrhoeal disease but do not report their suffering. Of particular concern is the extent and life-threatening nature of such diseases in the young. Of these, international organizations estimate that approximately 30% die from diarrhoeal diseases.

The problem is aggravated by the rapid population increases in most countries, particularly in the urban environment. This population explosion in the urban environment is compounded by migration from the rural areas. Perhaps up to 50% of the urban population living in major cities in the Region live in conditions of extreme poverty, filth, overcrowding and poor sanitation. Slum conditions are to be found in nearly all major urban areas. In addition, a significant number of people including large numbers of children are homeless. Urbanization has also impacted on social structures. This in turn results in a heavier emphasis on the purchase and consumption of food outside the family home. Street food vendors and food service premises are an essential and increasing part of the food supply system in nearly all countries of the Region but, without strict control of food preparation, storage and display practices, may become a major source of foodborne disease.

The interacting factors leading to ongoing malnutrition and an increasing incidence of foodborne disease are many and their inter-relationship extremely complex. The WHO Regional Consultation on the Development of a Strategic Plan for Food Safety in the South-East Asia Region was held at WHO/SEARO, New Delhi, from 27-30 October 1998 to enable Member States to address this complex issue and develop a Regional Strategic Plan for food safety improvement.

Nineteen participants from ten Member Countries participated in the Consultation along with two representatives from the Food and Agriculture Organization (FAO) and five

observers from other agencies [International Council for Control of Iodine Deficiency Disorders (ICCIDD), International Life Sciences Institute (ILSI-India) and Voluntary Organization in Interest of Consumer Education (VOICE)]. The Secretariat comprised experts from WHO headquarters (HQ) and the South-East Asia Regional Office, a WHO short-term Consultant and WHO technical officers from five countries.

As a result of group work and plenary discussions, the participants developed a ten-point strategy for enhancing food safety in the South-East Asia Region.

1. Food Safety Policy

- Despite the probable extent of foodborne disease, many governments have no clearly articulated written policy on food safety, nor, in several countries, is there any one authority with a clear mandate as the responsible authority for all activities in relation to food safety. National Plans of Action for Nutrition (NPAN) are said to have been drawn up by all the ten countries of the Region. In a number of countries however, they are seen as policies and plans predominantly relevant to the development of food security programmes. This may be a result of a self-sufficiency first approach, a consequence of the pressures exerted by a hungry population or simply political expediency. In addition, these programmes have of course been aimed at the prevention and management of nutritional diseases. In most of these countries, however, such programmes are not yet seen as key policy statements of relevance to food control authorities. The reluctance to establish documented policies and plans of action relevant to all participants in food safety is an indication of the failure of consumers, politicians and governments to recognize the true extent of the health and economic consequences of foodborne disease. Again, many possible causes exist for this failure, including ineffective communication, lack of awareness, inadequate data on the costs of foodborne disease, cultural habits, differing social values, traditions and taboos as examples.

- WHO has provided direction for the better integration of food safety policy in a number of initiatives, including its integration in National Plans of Action for Nutrition and in Health and Environment Plans established as part of the Region's Health and Environment Initiatives. Each of these approaches offers the concept of and mechanisms for an intersectoral approach to issues such as food safety.

Strategy 1: Countries should develop their food safety policy in integration with policies addressing food security, quality and nutrition and consistent with international requirements for participation in international trade

Related Actions

➢ Health authorities should promote the need for a multi-sectoral group at the highest level of government (possibly a single agency) to be established to review existing policies regarding their compatibility, relevance to society and appropriateness to protect the health of the population.

➢ International organizations, such as WHO and FAO, should continue to facilitate awareness of the social and economic costs of foodborne disease through national fora in order to increase political pressure for the establishment of such a multi-sectoral group.

➢ A multi-sectoral group (involving sectors such as health, agriculture, rural and urban development, food processors, food analysis, nutrition, commerce, hospitality, tourism, environment, education, consumers, women's affairs) should be established to undertake such a review at the national level.

- The review should initially identify a focal agency to drive policy change and to monitor the effectiveness of such an agency in achieving change. In the review, consideration must be given to the benefits of having the key ministry capable of drawing support from other ministries as the focal agency.
- Governments should provide the necessary resources to establish and support the secretariat of the focal agency and/or multi-sectoral group.
- Such a group must develop a harmonised plan of action for food safety and quality, food security and nutrition.
- In the immediate term, governments should establish a mechanism for the development, adoption and enforcement of sanitary and phytosanitary measures in order to meet the requirements of the SPS and TBT Agreements.
- To facilitate international trade in safe food, those countries which are either importers or exporters of food should establish mechanisms for the sharing of information, for the harmonization of regulations (outlined later) and for the development and application of risk assessment in the enforcement of food regulations.
- In the longer term, such a multi-sectoral group should also consider the economic and social costs and benefits of privatising elements of the national food safety and quality programme.

2. Food Legislation

Food legislation provides the foundation for national food safety programmes. It plays a pivotal role in directing the food control efforts of food inspectors. It informs producers[1] and processors of requirements regarding production, processing methods and product standards and provides the consumer expectations of a given food.

- Much of the law addressing food safety in the Region has not been evaluated as to its relevance and effectiveness. As a consequence, in some countries' the basic food law has not been revised significantly (amendments excluded) since the 1950s. Food regulations and food standards too have stagnated in some countries of the Region. In contrast, a few governments' commitment to modernising their societies and to improved food safety for their populations has led to a comprehensive revision of laws, regulations and standards and a commitment to the guidelines of the Codex Alimentarius Commission (Codex).

- In a Region where the vast majority of consumers rely on foods that have undergone little or no processing prior to purchase (fresh produce, household food, products of family scale or small industries and street-vended food), legislation must focus on the hazards associated with such foods. Legislation must also, however, address the hazards associated with food processed for domestic consumption, food for export and imported food.

1 producers in this context means persons such as farmers, firshermen, gardners, etc.

Strategy 2: Governments should regularly evaluate and revise their food legislation to ensure it best protects their populations and facilitates international trade in safe food.

Related Actions

- The governments' focal agency (as identified in 2.2.4) should, in collaboration with all interested parties including industry and consumers, regularly evaluate and revise food safety and quality legislation. To facilitate this, governments should make available sufficient resources for the task.
- The harmonisation of a country's legislation with other countries in the Region and globally should be facilitated by becoming a member of Codex, establishment of a national Codex Contact Point and Committee and participation in relevant Codex meetings. For such participation, both national and international support should be sought.
- Where appropriate, trading partners or countries with common borders should hold bilateral or multilateral meetings to harmonise legislation so that safe food can pass across borders with only the minimum delays necessary and so unsafe food is prevented from exportation.

3. Food Control and Inspection

- Food control systems are reliant on food inspectorate and public health inspectors to provide the main manpower. Generally, these inspectors are appointed at a number of levels of government. National food control and inspection staff are usually appointed under the Ministries of Health. In addition, inspectors are appointed under ministries such as agriculture, industry and commerce, to inspect raw materials and products to determine compliance with standards. Generally, these divisions/units are grossly under-resourced in terms of both personnel and equipment.

- Other levels of government that employ inspectors include provincial, state, union territory, district and municipal authorities. In some areas, this leads to duplication of responsibilities and a lack of accountability which, in an atmosphere of gross understaffing, can result in no one taking responsibility. With insufficient numbers of inspectors to undertake inspection duties, unscrupulous businesses have a high likelihood of going without detection. This is aggravated by the knowledge that food safety is often just a part of the duty of inspectors.

Strategy 3: Food inspection activities should be prioritised according to consumer risk, facilitated by the provision of training and guidelines and supported adequately by appropriate government resources.

Related Actions

- The frequency of food inspection activities should be prioritised according to risk, with high-risk foods being the priority.
- Governments should lay more emphasis on regulatory assessment with the objective of obtaining evidence that the seven principles of HACCP have been applied, the HACCP plan and pre-requisites are correctly implemented and that the system has been maintained.
- Enforcement agencies responsible for food inspection activities should prepare and disseminate a code of practice for inspectors as well as prepare materials for and train inspectors in the code of practice, modern inspection techniques based upon HACCP principles and sampling procedures in accordance with Codex.
- Enforcement agencies should identify the appropriate minimum curriculum that is required for inspectors to be either considered competent to undertake their regulatory role or to be accredited by the responsible authority.
- Authorities should establish, for inspectors, training commensurate with their responsibilities and potential earnings (e.g. Indonesia's three-tier training programme).

- Governments should be made aware of the community cost benefits of employing adequate inspectors (government or government accredited) to provide adequate coverage of communities. Subsequently, governments should make available at least the minimum resources necessary to assure the safety of food.
- Governments should consider a diversity of approaches for the mobilization of resources to strengthen inspection capabilities. Such approaches may include the establishment of licencing and analysis fees and the realization of fines.
- Governments should establish an effective management information system to enhance the flow of information regarding food inspection activities.

4. Analytical Capability

- Contaminant monitoring is an essential element of a national food safety programme. Its implementation provides the community reassurance of the safety of the food supply and identification of potential risks before outbreaks occur. Obviously, for such programmes to provide the necessary data, regulatory authorities must have access to laboratories with the capacity to analyse for the common causes of foodborne disease. While in many countries outside the Region, governments are more recently using accredited privatised laboratories for these purposes, most countries in this Region maintain government laboratories for food analysis. However, in a number of countries, even the central national food laboratories are inadequately resourced with respect to funding, equipment and personnel.

- Even central national laboratories sometimes only have the capacity to perform basic wet chemistry on food samples. Some central national laboratories have the necessary equipment for more advanced chemical analyses but may often lack the recurrent funds to purchase or replace materials such as reagents, columns, tubes etc. Consequently, essential equipment may be in a state of disrepair.

- The historical focus of food control systems on adulteration for the purposes of fraud and the origin of most as laboratories focused on drug analysis has meant that

laboratories have much stronger chemical analysis sections than microbiological. Consequently, even central national laboratories are commonly not set up to test for emerging pathogens such as *Campylobacter* and *Escherichia coli* O157. Provincial, district and municipal laboratories are even more under-funded.

- Furthermore, many laboratories in the Region do not apply adequate quality assurance procedures, do not participate in inter-laboratory testing and are not accredited.

Strategy 4: National analytical capacity should be strengthened by appropriate training, resources and establishment of quality assurance protocols and procedures.

Related Actions

➢ In the short term, governments should ensure that the central or national official food control laboratory has the capacity to precisely carry out those microbiological, chemical and physical tests necessary to detect and quantify, where possible, the hazards most likely to affect the health of the nation's population. To achieve this, international organizations, such as WHO and FAO, should be requested to initiate a regional activity focused on quality assurance in the food laboratory and the development and initial implementation of a protocol for regional proficiency testing.

- Subsequently, the national, central laboratory or a neighbouring (where there is only one laboratory in the country) country's central laboratory (employing ISO 25 guidelines) should be established by the government as a key quality assurance centre, evaluating, training and accrediting provincial, district and municipal laboratories.
- Where appropriate, governments should consider both the consequences and cost effectiveness of accrediting private laboratories to undertake analysis for regulatory purposes.
- Where governments remain committed to the concept of maintaining government owned and operated laboratories, adequate resources (including manpower and equipment) must be made available to ensure the ongoing successful operations of such laboratories.
- Countries should conduct routine monitoring of their food supplies to identify and assess trends in regard to food contamination. Countries should consider participation in the WHO Food Contamination Monitoring Programme to take advantage of the quality assurance and control services provided.
- Governments should, in undertaking such programmes, apply a methodology consistent with that recommended by the Codex Alimentarius Commission.

5. Epidemiological Systems

- In order to increase the availability of information necessary for advocacy of food safety issues as well as to plan, implement and assess disease control activities, a national epidemiological service with the capacity to establish surveillance and investigation procedures is essential. While such services exist in most countries of the Region, their resourcing also severely limits their capabilities. Slow management of health data by doctors, clinics and hospitals may also negate the effectiveness of these services with delays of up to several months before data on communicable diseases is accessed.

Strategy 5: Governments should identify the need for, and most appropriate approach to, foodborne diseases surveillance and provide the necessary resources.

Related Actions

➢ As country reports from the Region identified all foodborne diseases as notifiable, the central or core multi-sectoral group (developing food policy) should identify the most appropriate approach to foodborne disease surveillance and outbreak investigation. This may be achieved either using national expertise or by requesting international collaboration to elaborate the alternative approaches possible as laid down in the WHO publication WHO/FSF/FOS/97.3.

- Where there is not currently a centrally-administered epidemiological surveillance unit with the capacity to address foodborne diseases, a government's health authorities should establish such a capability, providing it the necessary human and financial resources.
- In those countries where a central epidemiological unit alone is inadequate to provide the appropriate level of responsiveness, the government must commit to the establishment of a regional/provincial/district network of centres in the longer term. In such circumstances, it is appropriate that this longer-term goal need be identified as part of the government policy and the necessary funds allocated.

6. Establishing Effective Working Relationships with the Food Industry and Trade

- The prevention of foodborne diseases requires that microbiological, chemical and physical hazards be prevented from contaminating food or be eliminated or reduced to acceptable levels at all stages of the food chain, from production to consumption. Measures implemented at the earlier stages of the food chain are able to prevent, eliminate or reduce many hazards. This is the first line of defence against foodborne diseases. It is essential that food control authorities interact with primary industry regulators and food producers to minimize the risk of agricultural and environmental chemical hazards as well as biological and physical hazards contaminating food. The failure to do so may lead to irreversible contamination and increased public health risk. The extent to which such working relationships exist is quite variable across the Region.
- Despite model food legislation drafted by WHO and FAO highlighting the need to involve producers, industry and trade in decisions at all levels of food control, a number of health authorities have failed to establish effective working relationships with these sectors.
- Increased international trade in food has led to a significantly increased availability of a very large number of food items. Monitoring these items may impose a very heavy burden on food inspection services, both in terms of cost and time. There is also a lack of awareness in some sectors of the food industry about the importance of food

safety practices and the necessity to properly train and educate food handlers. The food industry seldom consults health authorities on food safety problems arising during food processing. Few industries are involved in efforts to promote consumer health education.

Strategy 6: Governments should both assist food producers, industry and trade to assure the safety of food and require these sectors to participate in providing food safety and quality in all its products.

Related Actions

- Governments should ensure the presence of sufficient food inspectors (either government or government accredited) to audit industry's capacity to process high-risk food safely as a priority.
- Government should encourage small-scale food industries to realize its responsibility of care in the production of food through a diversity of awareness - raising activities and train (using government or government - accredited trainers) such industry personnel in the application of HACCP principles to food production.
- Industry should undertake food safety programmes based upon HACCP and quality assurance and control programmes as appropriate and training of its food handlers in basic principles of food hygiene commensurate with their work activities.
- Industry should consider establishing a diversity of approaches to facilitate consumer-industry interaction and industry-industry cooperation e.g. industry association

laboratories, association codes of ethic and consumer grievance cells.

- Governments should encourage the involvement of producers, industry and trade in national food safety developments through representation on central food safety boards or committees addressing policy. Producers, industry and trade should also be encouraged to participate in the Codex process. To facilitate broad representation in these processes, producer, industry and trade associations should be encouraged.

- Governments should actively promote international trade in safe food by undertaking activities such as promotion of those industries employing HACCP based systems, provision of pre- and post- audit services to these industries and establishment of a laboratory for standardization of quality.

- Governments should examine mechanisms for establishing import-export certification systems in accordance with Codex guidelines. Such systems should be promoted through a diversity of activities.

- Where appropriate, in order to increase access to sufficient supplies of safe food and to better empower the socioeconomically deprived, governments should collaborate with producers to facilitate financial support through programmes such as credit programmes.

- Governments should examine schemes (including certification and grading) to encourage producers to implement safe production practices.

7. Establishing Effective Working Relationships with Food Service Providers and Retailers

- Governments do not often have the resources to adequately regulate this sector which is significantly more extensive than the food processing industry. The limited number of food control personnel, the vast number of retailers and food service personnel, in some cases their mobility, socioeconomic condition, low level of education and lack of appreciation of safe food handling all make this sector a significant factor in determining the extent to which consumers can access safe food.
- If a community is to have the full benefits of such foods with minimal risks of foodborne disease, government intervention is required to protect consumers against overt health risks and to assure that the standard of safety of such foods is the best attainable in the context of the prevailing local situation.

Strategy 7: Governments should both assist the retail and food service sectors (particularly street food vendors) to assure the safety of food and require these sectors to participate in providing food safety and quality in all its products.

Related Actions

➢ Governments should establish or strengthen regulations and standards (based upon HACCP principles) which address the handling and retailing of food, particularly high-risk food.

- Governments may find it appropriate to encourage the development of associations, where appropriate, in order to assist the retail and food service sectors to better participate in future developments in national food safety efforts.
- For the street food vending sector, training based upon HACCP principles should be undertaken and, where feasible, essential utility services, such as electricity, potable water and waste disposal, made available to enhance food safety.
- Authorities (national, provincial, district or municipal) should employ tools, such as healthy cities, healthy schools and healthy market places, to focus on food safety in both urban and rural environments.
- Authorities should make every effort to provide a maximum inspection capability to address this sector, according to the economic capacity of the country, province, state or municipality.

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8. Establishing Effective Working Relationships with Consumers

- An informed and discriminating consumer is an effective incentive for the food industry to improve food safety and quality. In most developing countries, however, consumer awareness is almost non-existent because little information is provided to the public on food safety and quality, adequate diet, and nutrition and the relationship to adequate health and nutritional status. Greater efforts should be made to educate the public and involve their representatives in the establishment, monitoring and review of national food safety efforts.
- Historically, food control authorities have excluded consumers from consulting with advisory and decision-making bodies. However, the general failure to involve consumers and to implement effective consumer education has in itself resulted in barriers to improved food safety.

Strategy 8: Governments should both assist consumers to become aware of the importance of access to safe and nutritious food and require consumers (or their representatives) to participate in national efforts to assure the safety and nutritious nature of food for the community.

Related Actions

➢ Governments should establish a diversity of approaches to enhance consumer awareness and participation. A

cornerstone of these activities must be a commitment to the ongoing education of consumers (addressed under Strategy 10). However, other approaches may include consumer fora, the provision of support for the establishment of consumer associations, services (such as a consumer hotline), resources to increase awareness (such as education kits) and financial incentives (such as the reward system applied in Thailand).

- Governments should encourage and support, where necessary, consumer participation in the Codex Alimentarius Commission.
- Consumer associations should implement comparative testing programmes to determine the safety and quality of food. Any such testing should be undertaken in accordance with Codex guidelines and ISO 25.
- Consumer associations should consider a diversity of approaches to enhance consumer interaction with industry and government, e.g. consumer exhibitions, workshops and seminars.

9. Education and Training in Food Safety

- Only through education and training can food control authorities, industry and consumers be provided the necessary information to make decisions upon a sound scientific basis. Failure to do so allows ignorance, taboos and traditional belief to dictate their behaviour and practices. The competence of officers involved in food control is essential. However, throughout the Region the level of training provided is quite variable with some inspectors receiving orientation training only. In many countries, analysts also require additional training so that each can implement the necessary quality assurance to their activities.

- Industry at all levels also needs training in the hygienic production of food as well as the many hazards confronting food and the means of controlling these hazards. Additionally, most studies of the sources of foodborne disease demonstrate that most foodborne diseases appear to originate in the home. Consequently, attention must be given to the increased understanding of food hygiene principles in the general population and to those issues of particular concern to the nutritionally vulnerable. Failure to put adequate resources into the development of effective food safety education programmes for these groups will leave large numbers of the population unprotected and at greater risk.

- Where education and training has been undertaken, it has most frequently been developed to increase knowledge in the hope that increased knowledge will result in a change to food inspection, analysis, production, processing and consumption practices. Generally, programmes are evaluated simply by the production of materials and their breadth of distribution. Few efforts have been made to evaluate the effectiveness of this education and training and while attention has been paid to taking a participatory approach to education in other fields, little attention has been given to this approach in relation to food safety.

Strategy 9: Governments should recognize the need for, and facilitate a short-term and long-term focus on education and training for all sectors of the community in order for each of these to effectively carry out their responsibilities in ensuring the safety of food.

Related Actions

➢ Food safety education should be made an important and integral component of national food safety policy and education policy. As such, the development of multi-sectoral coordination (including groups such as government agencies, industry, academia, NGOs, social activists) and infrastructure for food safety should be nurtured.

➢ Development of advocacy materials for policy makers, training resource materials for implementers as well as education and training materials for producers, industry, trade, food handlers and the public are necessary.

- Food safety should be incorporated into the formal education curricula from primary school through to university. The multi-sectoral group overseeing food safety policy development should ensure that appropriate expertise is involved in curriculum development, particularly for primary schools.

- As an immediate-term strategy, governments need focus on consumers, particularly the socio-economically disadvantaged and the nutritionally vulnerable, as well as those producing (including farmers), processing, trading and handling food (including home-makers) targeted at these individuals. In addition, it is essential that training programmes prioritise the training of trainers (including health officers, extension officers, teachers and primary health care workers) who are already operational in the field (N.B. WHO is currently preparing and evaluating a guidance document for training primary health care workers in food safety).

- As most foodborne disease occurs in the home, governments should consider the integration of food safety into primary health care an immediate priority. To achieve this, qualified and appropriately trained personnel should be placed appropriately.

- The principles of the Hazard Analysis and Critical Control Point Concept should be identified as a core component of education and training in food safety for appropriate groups such as producers, processors and inspectors amongst others.

10. Research in Food Safety

- Research is an integral component of a national food safety programme. Information on the extent and costs of foodborne diseases, their causes and sources of contamination is essential for increasing government, industry and community commitment to the development, implementation and evaluation of current policies and programmes. Such research is also essential if food safety activities are to be better focused through sound scientific risk assessment. However, it is imperative that such research is timely, relevant to decision-makers and is communicated effectively. To achieve this, efforts should be made to provide essential resources, encourage the development and use of national and regional networks and databases and provide the necessary foundational research training.

Strategy 10: Governments should encourage and support a coordinated approach to food safety research and give priority to research which aims to provide the necessary data to better manage food safety.

Related Actions

➢ Governments should, through the central policy-making group, consider undertaking a national review of research priorities. Such a review should involve all relevant parties including universities, both public and private (where appropriate), industry and consumers.

- Governments should strengthen, through partnership national research capacity by a number of processes including making research funds available, capital investment in research laboratory infrastructure, training of researchers, development and institutionalization of research protocols and the development of laboratory maintenance protocols taking into consideration international guidelines.
- Governments should facilitate (through dissemination, technical or financial means) the integration of research outcomes into food safety policy and programme development, implementation, monitoring and evaluation. Dissemination of outcomes might best be achieved regionally by linking to the existing regional research-cum-action network in nutrition. Such an approach would both facilitate the better integration of food safety and nutrition.
- A regional approach should be taken to research into food safety issues of common concern to several countries in the Region. This would be particularly useful where common borders facilitate informal trade in what may be unsafe food. To achieve this, the immediate action would be to seek collaboration with an international organization for a regional consultation to review regional and national research priorities in food safety and quality.

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